

### Abstract of the Disclosure

A method of upgrading software and a network device for performing the same are provided so that the operation of a network device is not catastrophically affected by a failure occurring while software is being upgraded in a network environment. The method includes upgrading software through the network and checking whether at least one failure occurs during the upgrade, operating the network device based on an old version of the software used before the upgrade is performed when it is determined that at least one failure has occurred, and operating the network device based on a new version of the software to which the old version is upgraded when it is determined that a failure has not occurred. Accordingly, even if the upgrade of the software is not performed normally, the network device can reattempt the upgrade of the software without being serviced or without using an external memory device.